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ABSTRACT

This paper explores the relationship between sociology and forestry. It discusses the current state of pooled sociology/forestry knowledge and concludes that little has been published addressing issues of mutual benefit to the two disciplines. Research needs of potential mutual interest to the two disciplines are also discussed. The paper concludes that substantial sociological information exists which could benefit forest management, but that there are as yet only a few foresters who have been exposed to applications of sociology to forestry. (RE)

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Forestry: Research Issues for the 1980's

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Forestry is a multi-facetted activity and profession that possesses an institutional identity, belief system, organizational form and technologies (Lee, 1980). It has also developed a series of specialized functions that have distinct identities. These functions range from timber, wildlife, and recreation management to logging, transportation and wood processing. The activity of forest land use planning is a synthesis of these identities currently possesing a rather amorphous form, requiring consideration of the values and beliefs inherent in institutions performing forest management activities. Forest policy analysis addresses these same values and beliefs in assessing how forest land uses and management practices facilitate the pursuit of societal goals.

Sociologists have only recently become involved with foresters in attempts to address problems that have emerged from an increase in forest uses and public concern. Although the initial use of sociological expertise was to address exponential growth in the recreation use of forest land, providing assistance to the forester in the management of a broad range of resource conflicts is emerging as a more important role for the sociologist to play. This relationship still remains formative as each professional learns the questions that might best be addressed by the sociologist (as opposed, for example, to the psychologist), and the sociologist learns how alternative solutions might be incorporated into the forester's value and belief system. Critical issues for the 1980's-- forestry's impact on community, complex organizations and administrative behavior, technology transfer, and energy needs-- are each areas that the sociologist could help the forester deal with in planning, policy, and decision-making.

Present State of Knowledge

The amount of forest land in the United States and in other countries of the world might suggest that forestry is an area that sociologiest and certainly their rural counterpart would have addressed in some detail. While forestry is primarily a rural based activity, sociological studies of forest activity outside of those examining leisure and recreation appear to be quite limited. For example, there is nothing appearing in Rural Sociology since 1965 that deals with any of the forestry functions discussed earlier. Most of the material published is not in the mainstream of sociology journals, even those dealing with rural area issues. There are, however, a few articles written by sociologists for foresters that have appeared in the Journal of Forestry that describe issues like technology transfer (Muth and Hendee, 1980) and wood products labor force (Stevens, 1979). Similarly, there are research bulletin type reports with limited dissemination that have been published by resource management agencies by the U.S. Forest Service and the National Park Service and university based experiment stations describing research results of agency personnel and cooperative research done by university personnel. There are a few classic studies of forestry (Kaufman , 1964; Schiff, 1962) and several contemporary unpublished doctoral dissertations (see, for example, Culhane (1977) and Stumbo (1974)) which are important contributions, but these are limited to selected topics.

The need for sociological research on forest resource funcitons is quite evident and there are particular key areas that should be addressed immediately.

Research Needs

Given the limited treatment of forestry as an area of study by sociologists, there are several key issues that must be investigated to improve the manner in which forest activities are conducted and understand the impacts of these activities on the social structure.

Sociological studies of communities have provided an extensive literture applicable to forest-based towns and regions, yet there appear to be no studies of communities that are directly dependent on the extraction of wood from adjacent forest lands. There are only three studies of forest based communities (O'Leary, 1974; Kaufman and Kaufman 1946; Hayner, 1945). However, foresters have long been concerned about the impact of management activities on community stability. The lack of knowledge about communities is a problem for planners and policy analysts since it is unclear whether past or current activities actually provide stability and what the linkages between extractive activities and communities are. Opinion profiles of community residents toward forest lands, activities, and organizations would also be useful for community planners in monitoring values and beliefs in a changing social environment. Certainly these kinds of investigations will begin to provide a better basis for understanding occupational change in the woods labor force, the structure of that group and how these changes will impact and influence the areas of residence of these individuals. These studies are not only appropriate for North America, but are also needed on an international basis since multinational corporations are actively involved in South America and Indonesia in extractive activities that affect local populations.

The administrative behavior of organizations charged with forest management responsibilities is also an area that should receive priority for research. Kaufman's The Forest Ranger and Schiff's Fire and Water: Scientific Heresy in the Forest Service are both examples of classic studies of a complex organization and the resource decision making process. Yet there is a need to elaborate these kinds of studies to understand organizational change and provide guidance for future changes and administrative practice. Fire management has been studied to a limited extent to provide better organization and administration of activities. However, the study of human behavior as it

relates to wildfire has been identified as a major research need by the National Wildfire Prevention Task Force. Other forest functions are in desperate need of investigation. For example, complex resource planning decisions within organizations are increasingly made by interdisciplinary teams with individual members often selected to be sure there is one of everything participating, a "half of Noah's Ark" concept. Knowledge about how these teams should be structured and the identification of responsibilities for various issues would certainly provide better guidance for the direction of the bureaucratic process in a complex social environment. Other issues like public involvement would also be important areas to be examined under the rubric of administrative behavior.

Technology transfer is becoming an important concern in forestry as it is in other industries. Rural sociologists have conducted a large number of studies on the adoption/diffusion process in agriculture (Rogers and Shoemaker, 1971; Taylor and Miller, 1978). Yet that same devotion has not been shared in the forestry area. Forest management and production have undergone many technological changes to improve productivity and become less labor intensive since the future woods labor force is seen as diminishing. Technological change has affected certain portions of the wood industry, increasing the amount of wood harvested, but the number of workers has decreased and the background of the worker has changed. The impact, direction and adoption of technology for the small private non-industrial landowner is also a major area of concern similar to what has been studied in agriculture. Studies of technology transfer and adoption/diffusion in forestry would have implications for the different forest management functions and provide a basis for determining what and how technologies can be fitted to the situations encountered.

Finally the issue of changing energy needs and the forest resource is a major research area that needs to be addressed. The purchase and installation

of wood stoves is a significant response to the energy problem. There is evidence in segments of the United States that the demand that will be placed on the forest resource to fuel those stoves will far outstrip local supply. In some rural areas, wood heating has been incorporated only recently into the homes of more than 50% of county residents, shifting away from petroleum based heat sources. The fireplace for aesthetics has been replaced by a more functional approach. The manner in which local populations will deal with these problems and the impact on the forest resource are certainly examples of issues that are not even thought about by decision-makers. International examples of fuel wood shortages resulting from forest exploitation are well known. The American condition may become a new experience. Citizen attitudes, degree of shifts to wood use, and organizational responses are all examples of research areas the sociologist might be investigating.

Conclusion

The definition of this relationship between the sociologist and the forester is important. There are still only a few foresters that have been exposed to and thought about how sociological concepts might be applied to resource management activities. The sociologist that works with the forester must understand the value and belief system of the profession to provide assistance that can fit into that institution. Substantial information in sociology exists that could be synthesized to provide some solutions to the critical problems the forestry profession faces in the 1980's. The issues identified are only those that we felt are in need of immediate attention and should not be viewed as all inclusive. These are a start to make understanding the social system a more visible component for planning and policy making in forestry.

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